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VOLUME XXII

NUMBER 10

THE AGRICULTURAL STUDENT

OHIO STATE UNIVERSITY, COLUMBUS, OHIO

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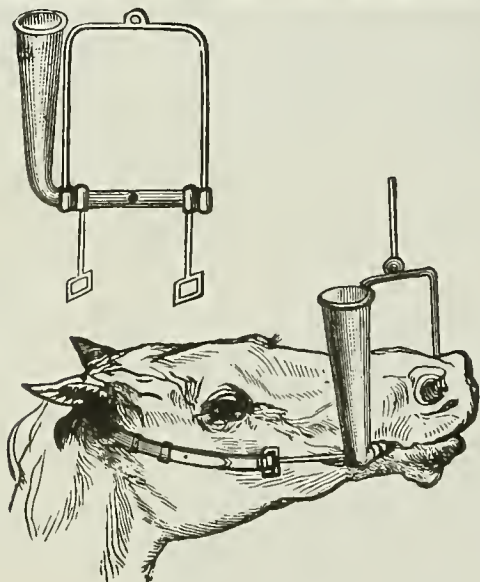
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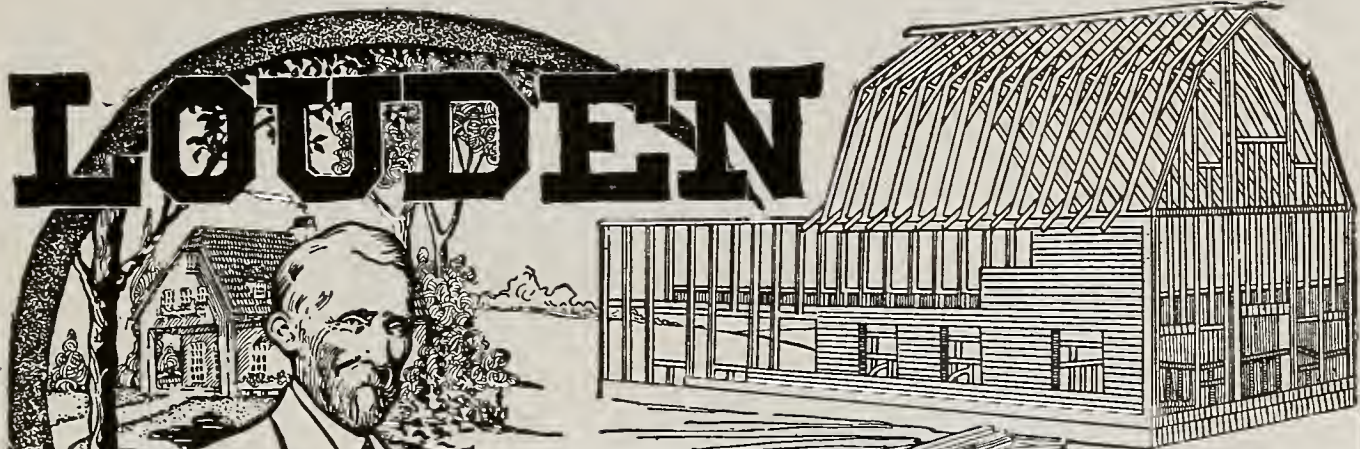
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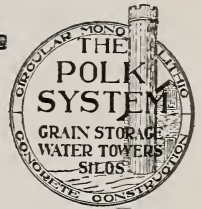
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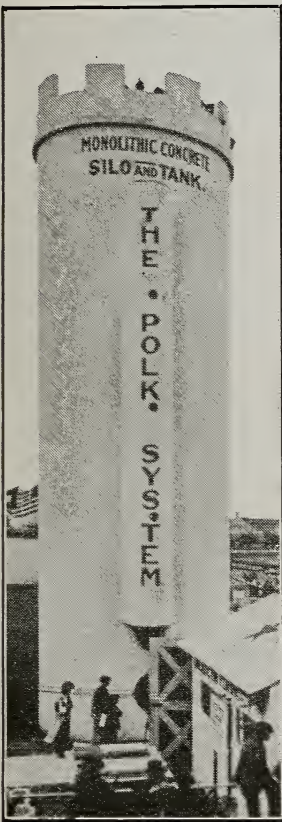
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The University Hall

THE AGRICULTURAL STUDENT

Vol. XXII.

OHIO STATE UNIVERSITY, COLUMBUS, JUNE, 1916

No. 10

STUDENT ACTIVITIES IN COLLEGE OF AGRICULTURE

**How the Organizations in the College Offer an Opportunity for Training in
Commercial Life: the Grange as Laboratory for Social Service:
Association Offers Three Features.**

WHEN the Ohio State University began to grant degrees in agriculture along in the 90's there was little to commend the institution as a place where Ohio farm boys and girls could secure a training in the activities of country life along the educational features. The equipment was meagre, practically all of it being housed in the basement of University Hall and the English building which was burned during the winter of 1914. The old Horticultural building which stood on the present location of the new Horticulture and Forestry building was perhaps 30 by 40 feet in size and constituted practically all the class room space for the 76 students enrolled in 1894.

However, at this early date attention was given to activities among the students. The Agricultural Students Union was formed at this time which sought to spread the gospel of better agriculture over Ohio. Its work was at once recognized and later became the basis of the present agricultural work of the University and the cooperative experiment work of the Ohio Agricultural Experiment Station. This association also started The Agricultural Student. Only one other organization which exists now was instigated at that time—Townshend Literary Society.

Since 1894 a number of student organizations have been started; quite a

few lived but a short time but at present the main activities are centralized in the Horticultural Society, the Saddle and Sirloin Club, the Home-economics Club, the Downing Club, Townshend Literary Society, the Jeffersonian Literary Society and the University Grange. While the grange is composed of students and faculty the greater number of constituents come from the student body of the College of Agriculture.

All of these organizations have definite plans to carry out during the year which are to a large extent closely correlated with such activities as the students will meet in commercial work. The Horticultural Society stages each year the annual Apple Show which rivals any Ohio show on the basis of quality and originality in the display of fruit and vegetable products. The work of putting on the show has been correlated directly with classroom work; in addition many of the student members have been called to judge exhibits at county fairs and to aid in other horticultural activities over the state. Perhaps the Horticultural Society was instrumental in pushing the apple judging team to the front in their scoring at the contest at Baltimore last December. Ohio's team took first in the contest in the second year of competition.

The Saddle and Sirloin Club, though

composed of but fifty members, stages annually the Ohio State Horse Show as its principal function. At the last event a crowd of 3,000 was entertained even though the show was competing with a grand opera in Columbus that week. The educational idea is always adhered to and any money which accrues is used to further the interests of the stock judging teams at the national livestock exhibitions.

University is wider in its scope than the University Grange. Founded on the principles of the national fraternal organization it simply gathers together the students from all parts of Ohio and furnishes a training laboratory for all in the social science of rural organization. The University Grange is the largest in the world and holds the record of initiating the largest class ever placed on the national rosters. Already



A view of the campus from West Eleventh Avenue.

The Home-Economics Club has been in existence for only a few years yet its work is definitely laid out. Lectures are given during the year by faculty members and members of the club are detailed to work in and about Columbus in the interest of household betterment and civic improvement in schools. With the new Home-Economics Building for a laboratory to extend its work the club expects to expand their activities next year.

Perhaps no organization in the Uni-

student members of the grange have organized subordinate chapters in their home community and the systems bid fair to predict that the influence of the University Grange will extend to all parts of the state. The grange has acquainted the students with each other and with the faculty of the Agricultural College more than any other organization on the campus.

With the growth of the college the specialization of societies has been brought about. Perhaps the latest of

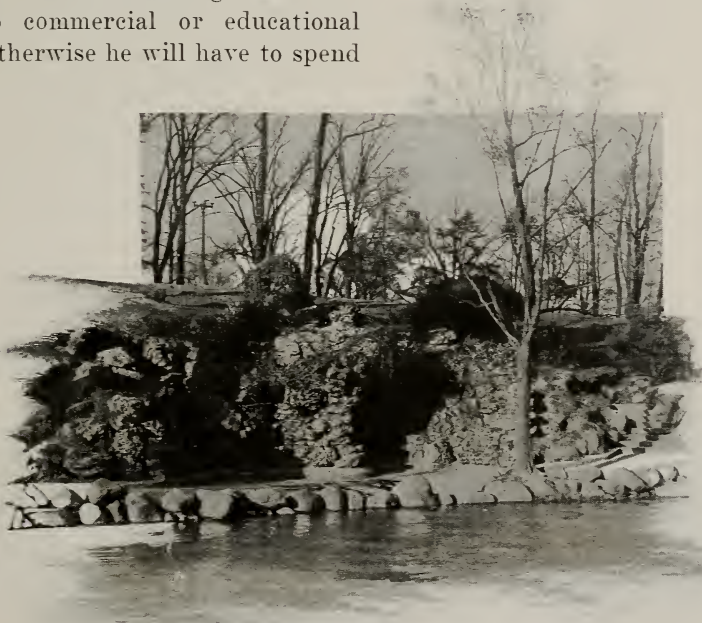
these is the Downing Club now composed of the students who are interested in landscape architecture. Persons who have witnessed the progress made on the campus in regard to the improvement in plantings about the buildings can realize some of the features the club is striving to obtain. Formerly the newer structures on the campus appeared as though they had been dropped from the sky but now they blend attractively with the landscape.

Thus we see that gradual increase of student societies has come about but perhaps not as many as one might expect in an institution which has approximately 1200 enrolled each year. However, those societies which have endeavored to make their work permanent and clearly correlated with commercial activities have thus far succeeded in presenting the ideals sought by the students.

The student who goes in for activities in the College of Agriculture has that time to his advantage when he takes up commercial or educational work. Otherwise he will have to spend

an extra amount of time in learning the ways of men and business in his particular line. The student organizations in the College of Agriculture strive to furnish this training and at the same time extend the idea of agricultural education over the state.

Pick out the prominent graduates of the college today and your first impression will be "What did they do in College?" They too will point with pride to their beginning,—the student organization with which they associated. According to one graduate of the College many men fail in the business world for three reasons: "They cannot say what they think, they are unable to express their ideas in writing and they become embarrassed on meeting strangers." Student organizations however, offer the opportunity to become proficient in all three and to this end the student activities in the Ohio College of Agriculture are being developed.—The Editor.



The University Spring.

ACTIVITIES OF THE RURAL ECONOMICS DEPARTMENT

STUDENTS who go through the four years of the college course may become experts in animal husbandry, chemistry, dairying or agronomy, yet they may lack, to make them successful farmers, the ability to manage efficiently. To bring these different departments of instruction closer together the department of rural economics was organized. This department aims in the course given to the upper classmen to bring together the ideas that they have gotten during the college course in a way that they will be of greater use to the graduate in the efficient management of the farm, or in making them more proficient in rural leadership.

The faculty of the department is composed of three members: Dr. Paul L. Vogt and assistant professors, Dr. J. I. Falconer and Thomas D. Phillips, and G. N. Daggar, representing the department in the extension work. The number of students in the department during the present year was 349 the first semester, and 258 the second semester.

The work of the department consists of teaching the various courses offered, of research work carried on by the department and of extension work throughout the state. The different subjects taught are rural economic organization, farm management, farm and cost accounting, rural social organization, land tenure, and history of agriculture. Opportunity is also given in the department for students to do research work along social or economic phases of rural life or in farm management.

Courses 103 and 104 are required of all four-year students in the College of Agriculture during the senior year.

The former consists of lectures and laboratory work in studying the problems of farm management. Special reference is given in this course to the economic principles that are involved in the production of agricultural products, the organization and administration of the farm and to the business of farming from the standpoint of the individual. In the latter course which is given by lectures, consideration is given to the more important economic problems that affect the farmer. Among these problems are the relation that other industries have on agriculture, the relation of the tenant to the landlord, the financing of the farm and the relation of the farmer to the government.

For students who wish to study the agriculture of earlier times a course in historical and comparative agriculture is given. In this course attention is given to the agricultural methods practiced in former days and to the gradual evolution that has taken place in the development of agriculture to its present state. The factors that have had their influence on the agriculture of the present and the development of agricultural literature are also given consideration in this course.

The business side of the farm has its consideration in the course in farm accounts, records and cost accounting. In these courses the student is taught the general principles of accounting as they are applied to the business of farming, after which he is given work to do in the different systems of keeping farm records that are best adapted to the different methods of farming practiced.

Students wishing to specialize in rural economics have the opportunity to

pursue courses in rural social organization, land tenure, farm management and in research work on rural and social organization. In these courses the effect of the rural church, the rural school, rural home and farmer's organizations on country life are studied. Consideration is also given to the distribution of agricultural products, the methods of marketing and prices, and to the principles and methods of cooperation which are best adapted to the conditions found in the United States.

The courses in the department are especially intended for persons who expect to be farmers, county agents, leaders in religious, social and educational work, editors of farm papers, and for those persons who intend to become research workers for state and federal service in marketing, rural organization and farm management.

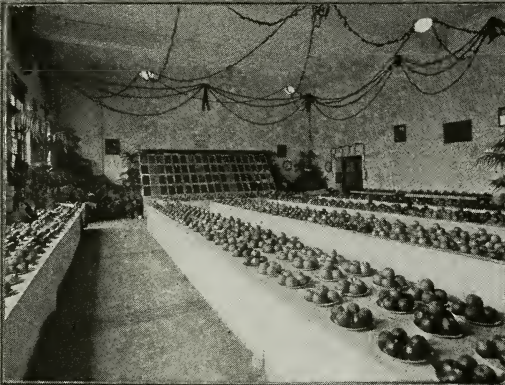
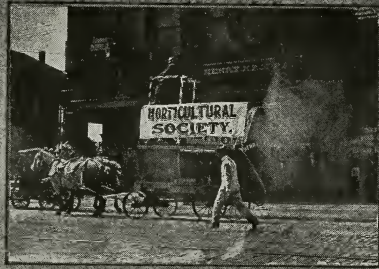
During the past year the department has started keeping a book account record of 20 farms situated in different parts of the state. These records will be kept for a period of 5 years for the purpose of getting an idea of the cost of producing the different crops under different conditions and management as well as to discover means by which leaks in farm management can be rem-

edied. The department also takes records of farms in the state and after looking over the farm and records carefully will tell the farmer the places where they think he can improve it and how to carry out the improvements.

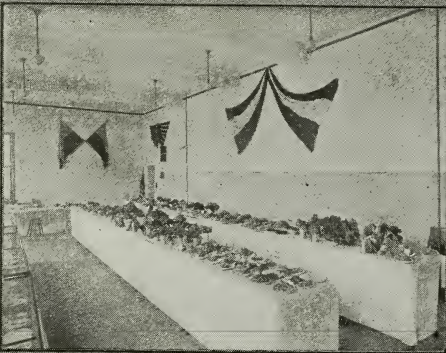
Farm demonstration work was carried on in Geauga, Miami, Trumbull, Clinton, Washington and Sandusky counties during the past year. It is being planned to extend this demonstration work in cooperation with the United States Department of Agriculture in rural social and economic organization and in marketing. The department is now collaborating with the Office of Markets, United States Department of Agriculture in investigating the Grange of Ohio.

The field for the man specializing in rural economics is comparatively large and as it is a new field it is one that is growing. The county agent movement is demanding men that are trained in rural organization and leadership. Other lines of work that are open to these men are editing of farm papers, doing research work in marketing, rural organization and farm management for the United States Department of Agriculture, teaching and rural social work.





● AMONG THE HORTS ●



HORTICULTURAL ACTIVITIES AT OHIO STATE

PROF. W. PADDOCK

HORTICULTURE was one of the first subjects to be taught in the College of Agriculture. The first attempt at organizing a separate department for the teaching of this subject resulted in the formation of a department of botany and horticulture in 1884. Under this arrangement the department continued until 1894 when a division was made and a new department of horticulture and forestry created. In 1908 a further division resulted in the present departments of horticulture and forestry.

The building occupied by the Ohio Agricultural Experiment Station, when it was located on the campus, was given to the department of horticulture and forestry when the station was moved to Wooster in 1892. This building was occupied by the department until 1913 when it was torn down to make room for the present structure. The new building, which was completed in September, 1914 at a cost of \$135,000, contains approximately 1 acre of floor space. Aside from the lecture rooms and laboratories, there is located in the building an air washing plant, a cold storage plant, a canning laboratory, and a spray laboratory.

The new greenhouses located back of the building consist of a vegetable house, 44 by 117 feet; a carnation house, 30 by 100 feet; a head house, 10 by 77 feet; a palm house, 24 by 36 feet and a laboratory work room 20 by 79 feet. Crops of vegetables and flowers are being produced in these buildings during the year and sold.

The faculty of the department consists of three professors, Wendell Paddock, Vernon H. Davis, and Lewis M. Montgomery, one non-resident profes-

sor, two assistant professors, two instructors and one assistant. The number of students in the department the first semester was 365 and during the second, 392.

As it is now organized the department consists of four sections, namely, vegetable gardening, pomology, landscape architecture and floriculture. A complete four-year course is arranged for each division.

The four-year course in landscape architecture was organized at the beginning of this year under the direction of Professors Elwood and Taylor. In this course consideration is given to a systematic identification and study of the characteristics of trees, shrubs, vines and herbaceous perennials used in landscape gardening. Practice is given in the application of the principles of landscape architecture as they relate to the development of public and private property including farms, country estates, gardens and parks, public squares in cities and street intersections. In the course in the history of landscape architecture, a study is made of the literature and chronological development of landscape gardening; the modifications affected by the different countries and their effect on the development of modern landscape gardening.

The four-year curriculum in floriculture will be in active operation at the beginning of next year. The work of this course consists of the history, propagation, culture, preparation for the market, marketing and storing of greenhouse plants and cut flowers used in the wholesale and retail trade. Practice is given in arranging of plants to produce decorative effects, including

bouquets, baskets, designs, and table and house decorations.

In the course in pomology and vegetable gardening, training is given in planting, cultivating, harvesting, and marketing of truck crops and fruit. This includes a study of the orchard fruits of Ohio, sites and soils for plantations, selection of nursery stock and planting plans. Attention is also given to the history of the methods of vegetable gardening and orchard work and to the methods of experimentation and research done by the experiment stations with the aim of preparing men to do research work as well as to become familiar with the literature and methods of horticulture.

Up to the present time little attention could be given to graduate students due to the lack of facilities. The

completion of the present building and the greenhouses now makes it possible to offer excellent opportunities to any one wishing to do research and investigational work in some phase of pomology, olericulture or plant breeding. The library of the University and the laboratories and equipment of the department are available to anyone desiring to pursue graduate work along any horticultural lines.

The student activity of the department is the Horticultural Society. This society, which has about 60 members, stages annually the Ohio State Apple Show, which is held usually the second week in December. Premiums amounting to \$400 were given away at the show held last December. More than a hundred varieties of apples and several hundred exhibits, together with



Downing Club (Landscape Architecture)

Top Row: Runyan, Prof. Montgomery, Prof. Paddock, Kennedy. Second Row: Prof. Taylor, Tussing, Prof. Elwood, Kotheimer, Hejna. Bottom Row: Dupre, Albing, Leonard, Fish.

exhibits of squashes, pumpkins and other vegetables made up the display that took up three rooms of the Horticulture and Forestry building.

The field for work in horticulture is one that should not be overlooked. Not only is there opportunity for the college graduate to enter the teaching profession but there is also a large field for the man who wishes to grow truck crops or fruit for the market. Vegetables are a staple product and their use is increasing in greater proportion

as the price of living advances. The hill sections of southern and eastern Ohio offer splendid opportunities to the man who wishes to grow fruit.

The new course in landscape architecture opens a field that has as yet received only slight attention, but the people in the city as well as in the country are waking up to the fact that the pleasure of living not only depends upon good things to eat, amusements or other conveniences, but also upon having pleasant surroundings.



Horticultural Society

Top Row: Devore, Bachman, Sharpe, Willing, Sparks, Simonds, Barr, Hussey, Kibler, Rothacker. Second Row: Fenner, Porter, Wuist, Roth, Clayton, Glines, Trisler, Loughry, Nauts, Eddy, Wyant. Third Row: Runyan, Bergmann, Whitmann, Story, Deibel, Gaiser, Albing, Dutton, Peebles, Scarff, Peck. Fourth Row: Schuh, Fouser, White, Wernicke, Van Meter, Foote, Wind, Veazey, Bliss, Shotwell, Kette, Richter. Bottom Row: Drain, Ruetenik, Lutz, Leyda, Mosier, Forsythe, Cross, Miss Smith, Miss Perrin, Copper, Ochs, Prof. Montgomery, Leonard, Lewis.

· WITH THE AGRICULTURAL CHEMISTRY DEPARTMENT

PROF. T. G. PHILLIPS

MANY lines of work considered under the subject of agriculture have to do with the growth of plants, animals or other processes that involve chemical changes. In these lines the cooperation of the chemist is needed in order that a complete knowledge may be obtained so that rational improvements can be made. The department of agricultural chemistry offers courses in the chemistry of soils, dairy products, and feeds, and foods aside from the general courses in agriculture and home-economics.

The faculty of the department consists of two professors, Alfred Vivian and Dr. John T. Lyman, assistant professor, Thomas G. Phillips, three instructors and one assistant, besides eight advanced students who assist in the laboratories part of their time. The number of students in the department this year was 620. Of these, 240 were enrolled in the four-year courses, 210 in the three-year courses, 130 in eight-weeks courses, and 40 were advanced and graduate students.

The work of the department is made up of teaching, research work and extension work. Aside from the lectures given to the eight-weeks students the courses are divided into two groups; first, the general courses, and, second, the more specialized advanced courses. In the first group there are two semesters of work that are required of all students in agriculture, horticulture and home-economics, and three terms required of all three-year students in agriculture.

In the general course for the four-year students in agriculture, instruction is given in the food requirements

of plants, sources of plant food, why soils are exhausted and how they can be improved, the composition of barnyard manure and commercial fertilizers and in the composition of feeding stuffs and dairy products, by lectures and in the laboratory. The laboratory work consists of a quantitative analysis of fertilizers, feeding stuffs and dairy products. The general course given for the home-economics students includes lectures on foods and other materials of household interest, with a complete analysis of the same in the laboratory.

Persons wishing to specialize in chemistry either for teaching or to prepare for research work in the government or agricultural experiment stations are offered advanced courses in soils, dairy chemistry, and food analysis. These courses are confined chiefly to analytical work in the analyzing of soils, dairy products, dairy feeds, and foods with the aim of giving the student practice in the official methods employed in analysis. In addition to these courses research work may be taken up along any lines of soil or food investigation work.

Work open to the graduate in chemistry is not limited to the departments that are called chemical. Many of the leaders in animal nutrition, plant physiology, dairying and other lines have had chemical training. The dairyman, the miller, the manufacturer of corn products and other materials are aided by the chemist. The chemist also holds an important office in protecting the people against fraudulent manufacturers of foods, dairy products, dairy feeds, fertilizers and insecticides.

WORK WITH THE DEPARTMENT OF FARM CROPS

ALL farming depends on the production of crops. To produce them requires a careful study of the conditions under which they are to be grown and hard work in caring for them. The department of farm crops which was newly organized at the beginning of the present school year offers courses in field crops, cereal crops and forage crop production and in field

the department during the present year was 302.

The work of the department consists of teaching of investigational work and research work. Consideration is given to a study of the history, adaptation, distribution and classification of the cereal crops and the cultivation, harvesting and marketing of the same throughout the agricultural sec-



East View of the Botany and Zoology Building

crop improvement for undergraduate students in the four-year course in agriculture. In addition opportunities are given for students to pursue advanced and research work in field crop production and improvement.

The faculty of the department is composed of three members, Prof. Forest W. Stemple, acting head, Adolph E. Waller and Lloyd E. Thatcher. The number of students that took work in

tions of the world. The course in cereal crop production gives practice in judging and grading and classifying the different varieties and in making physiological and cultural experiments. Opportunity is given by the use of the laboratory, library and University Farm for doing research work in plant breeding, for studying plant breeding experiments at the University and at the state experiment stations through-

out the country and in investigating the crop improvement work that is being done at other universities and experiment stations. The department is now carrying on several experiments along plant breeding lines and in investigation work on the effect of different farm conditions on the production of crops. All of the results of these experiments are or will, when completed, be available for the uses of the students.

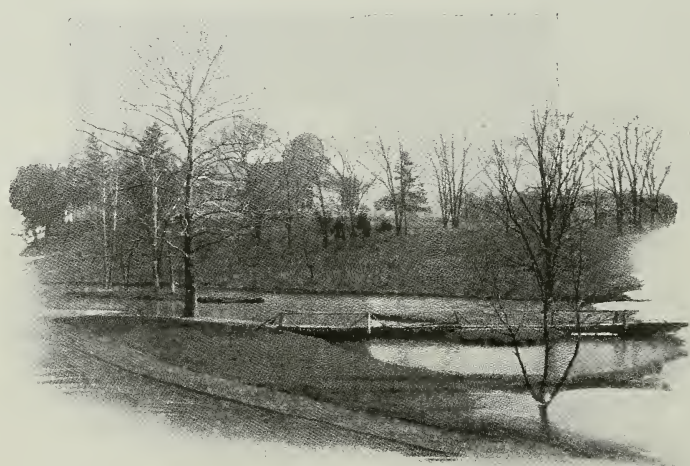
The aim of the department is to train men to grow crops or to enter the professional field either for doing investigation work for the government in farm management as related to the growing of crops, in crop production and improvement or to offer training for those who wish to teach. The opportunity for work in these lines is almost unlimited according to crop experts.

Our knowledge of crops so far as any scientific data is concerned is only in the pioneer stage. Every day crops men find statements regarding practices and results that have no authentic data to prove them. For doing inves-

tigation work in crops a man needs to be well trained in chemistry, botany, bacteriology, plant pathology, genetics as well as have a thorough knowledge of the crops which he is studying.

Government work open to a crops man includes investigation work in such phases as the marketing of grain, crop reporting, county agent work, and other work connected with the bureau of plant industry, United States Department of Agriculture. In teaching in the agricultural high schools there is no work that will attract more attention as that of crops. Preparation for work of this kind means that the person must have a thorough training in the subject of crops.

This is the latest department that has been formed in the College of Agriculture, it being until this year a part of the department of agronomy. It is being planned to add another man to the instructional force of the department. The department of agronomy of which it was formerly a part included the departments of agricultural engineering, soils, and field crops.



WITH THE DEPARTMENT OF HOME ECONOMICS

PROF. EDNA N. WHITE

IN EARLY times when education was confined to religious, theological and medical subjects little attention was given to the education of the women. But women began to exert themselves more and more and in the early part of the nineteenth century they were admitted into the literary departments by several universities throughout the country. In the latter part of the nine-

ment of home-economics was started at the Ohio State University in 1899 with Miss Perla Bowman as its first instructor. In 1901 the first class which had six girls was graduated. Since then the growth of the department has been gradual and at the present time it is one of the largest departments of its kind in state universities in the United States. In 1916, sixty girls will re-



West View of Oxley Hall

teenth century when the teaching of the different vocations, such as agriculture, horticulture, forestry, and engineering became popular, the thought that such a course in domestic science for girls would fill a long felt need in the training of girls, became apparent. With this in view departments of domestic science were established in the universities in the country.

The department of domestic science which was later changed to the depart-

ceive the degree of Bachelor of Science in Home-Economics.

The faculty of the department consists of two professors, Edna N. White, head of the department, and Minna C. Denton; two assistant professors, Anna R. Van Meter and Maude C. Hathaway, three instructors and five assistants.

Four-year courses are offered in the College of Agriculture and Education leading to the degrees of Bachelor of Science in Home-Economics and Educa-

tion respectively. A combination course leading to the degree of Bachelor of Arts and Science is given by the Colleges of Arts and Agriculture.

The courses in the department are planned to meet the needs of three classes of students. First, those who wish to specialize in home-economics with a view to follow the work as a profession, either through teaching, as directors of institutions, as dietitians, or in various commercial lines. Second, those who desire a liberal education, together with a practical knowledge of the principles fundamental to home-economics which will later fit the student for home responsibilities. Third, those who are planning to teach home-economics in the public schools.

Work is offered along various lines in the study of the selection and preparation of foods, dress, sanitation, management and decoration of the house, dietetics, teaching of home-economics and seminar.

The seminar course is planned to include the working out of 33 problems involving special research. Among these problems are a survey of the housing of women students of Ohio State University, a study of the organisms in wheat flour which causes the salt-rising fermentation, and working out of properly balanced dietaries of moderate cost for orphanages. Graduate work is now offered in the graduate school, and in the new building special laboratories have been provided for research work.

The extension force in home-economics is directly connected with the department of home-economics. The head of the department is the director of extension work and in addition to the regular extension force consists of an assistant supervisor and nine instructors. The latter spend the greater part of their time in giving instruction in

movable schools of which there are two types. (1) Movable schools for village and farm women, and (2) movable schools in connection with county normal schools. During the present year, forty-five regular movable schools were held, two instructors being in charge of each school. Thirty-four weeks' instruction in county normal schools were also provided for. Home makers' clubs are organized for girls over the state and instructors furnished for the judging of products prepared by contestants.

As a result of one week's work in one county normal school, a self-supporting lunch room has been established; work in sewing and cooking has been introduced into the high school in consolidation with the normal school. Attention is also given to all reasonable calls from farmers' institutes, women's clubs and like organizations requesting speakers, literature or judges for contests.

The student activity of the department is the Home-Economics Club. This organization gives the girls a chance to become acquainted as well as an opportunity to exchange views on different phases of home-economics work.

The new building which is now in the process of construction at a cost of approximately \$150,000, is a three-story brick structure and is located on Neil avenue between the Botany-Zoology building and the Horticulture-Forestry building. A textile laboratory has been provided for the freshman girls in their study of textiles. An experimental flat will be used in connection with the courses in house decoration and household management. A large room has been provided for work in institutional management. The extension department will have a laboratory for demonstration work and also a large room to be used by the women who come for

instruction during Farmers' Week. On the second floor there will be an auditorium with a stage and a seating capacity of 500.



Home Economics Club

Ossing, Waid, McAnnal, Lawrence, E. E. Hutchison, Hughes, Griffen, Fields, Wiley, Johns, Seitz, Atcheson, Merion, Callahan, Engle, Hatfield, Davis, Uncapher, Richards, Ludman, Wagey, G. Garmhausen, L. Garmhausen, Whitis, Beale, Holicek, Thurston, Blue, Nutt, Poulson, Patterson, Hamnel, Heckathorn, Lewis, Young, Barckley, Connel, White, Hyde, Brady, Pond, Cass, Atcheson, Kirkpatrick, Nolan, Eickhorn, Werner, Osborn, Morrill, Nouse, Wagner, Thomas, Milner, Gulette, Krause, Hicks, Hunter, Long, Cornman, Payne, Millikin, Zinn, B. Smith, Apple, Cornell, Sanderson, Gossard, Miller, Stevens, Waring, Simon, Sherwood, McCartney, O'Hara, Kile, MacConathy, Beach, Biefvicher, E. B. Hutchison, Schaweker, Darrah, Springer, Miss White, Miss Denton, Hathaway, Skinner, Tucker, McGuire, Brady, Adams, McGinnis, J. Smith.

AGRICULTURAL ENGINEERING WORK AT OHIO STATE

THE agricultural engineering department is one of the latest to be organized in the College of Agriculture, it being formed in 1914. The work in agricultural engineering previous to this time was given in the department of agronomy. At that time one man gave all the instructional work in the subject.

When the department was separated

followed for the sake of bringing in new ideas.

The number of students in the department this year was 417. It is expected that the three new courses which will be offered for the first time next year will materially increase the enrollment.

Courses are now offered in farm machinery, farm power, farm structures,



Horticultural Building which Houses the Agricultural Engineering Department

from the agronomy department Prof. Harry C. Ramsower was made head of the department and Prof. Frederick W. Ives was placed in charge of the concrete and architectural drawing work. In 1915, Glen W. McCuen was made instructor in farm power. An additional instructor will be added to make four instructors in the department for 1916-1917. The policy of choosing instructors from other colleges is being

concrete and drainage with advanced work along various lines of engineering. The courses in advanced farm machinery and farm power are popular among the agricultural students.

Course 101 which is required of all four-year students includes a detailed study of farm power, farm water supply and farm machinery with practice in comparing and testing farm machines, handling concrete, rope splic-

ing and in the working out of problems in farm mechanics. The course in farm structures gives consideration to the cost of buildings from different materials; the causes of decay of timber and prevention; composition of paints and varnishes and how to apply them, and the principles of ventilation.

The course in drainage consists of lectures on the construction and use of leveling and surveying instruments; the comparative cost of different systems of tile drainage; and a history of road building with an estimation of the cost of building the different kinds of roads. Field work in the course gives practice in differential leveling, laying out of drainage systems and obtaining areas by chain and transit.

The facilities for giving laboratory work in the department are lacking, and it is necessary that they be increased to accommodate the increased enrollment. Plans have already been prepared for a three-story building 150 by 200 feet to be built at a cost of

\$150,000. Such a building would provide a proper amount of room for the various lines of work and give an opportunity for carrying on graduate work. It is hoped by the department that the next session of the legislature will appropriate enough money to erect the building.

The extension work of the department is increasing at a rapid rate. This work is concerned chiefly with water supply systems, drainage and farm buildings. During the past year several drainage systems were laid out for farmers over the state, a number of septic tanks and watering troughs have been constructed, hydraulic rams installed and farm buildings planned and rearranged.

The department feels that its largest field of usefulness lies in conveying its teachings to the farmer. It is through the extension service that the department hopes to realize the object it has set for the future.



SOILS WORK TRANSFERRED TO AGRICULTURAL CHEMISTRY

THE department of agronomy was organized as a separate department in 1906. Originally it included the work now given in field crops, agricultural engineering and soils. In 1914, agricultural engineering was made into a separate department and in 1915 the field crops work was put into a department by itself. This left only the work of soils in the department.

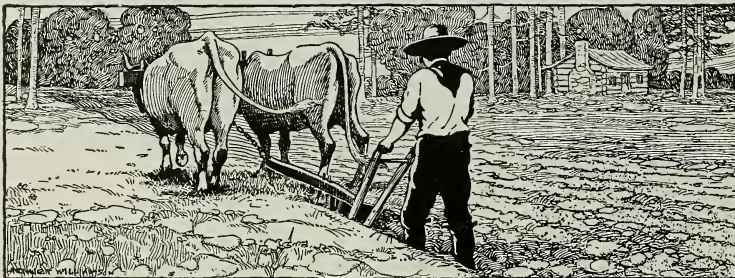
The faculty of the department consists of Prof. Arthur G. McCall, head of the department; Earl C. Sleeth, instructor, and Phil E. Richards, assistant with two graduate assistants in the laboratory.

The work of the department includes teaching, research and investigational work in soils and extension work. The instruction given in soils takes up the general character and distribution of the more important soil types in the United States and their adaptability to the growing of different crops. Special reference is given to the factors underlying soil fertility and the effect of the different methods of cultivation and cropping that are practiced. Practical work is given in identifying and mapping of soil types along with practice in making a mechanical analyses of

soils and studying of their physical behavior. Consideration is given to preparing the student for doing soil survey work.

During the past year several papers were published from the department upon absorption by soils of potassium from aqueous solutions of potassium chloride, availability of nutrient salts, methods for the renewal of plant nutrients in sand cultures. In addition to this the department has collected through research work sufficient material for three papers which will appear this summer.

Beginning July 1, 1916, the soils work will be transferred to the department of agricultural chemistry and the department of agronomy will be abolished. The doing away with this department marks the passing away of the oldest undergraduate soil physics laboratory in the country. From this laboratory originated practically all of the improved apparatus now in use for the study of soil physics. The combining of the two departments will do away with much of the duplication of work that existed between them and will make for more efficient service in instruction.



DAIRY DEPARTMENT DIRECTS VARIOUS ACTIVITIES

THERE are three well marked steps in the development of modern agriculture. First, the raising of crops and hunting of wild animals was the means for obtaining food; second, a change to the growing of livestock in connection with general farming; and third, an intensifying of the methods of farming with a concentration about the cities and towns. The intensified farming methods manifest themselves in the form of truck farming or dairying. In order that men could better fit themselves for dairying either on the farm or as a creamery man, the department of dairying was started at Ohio State University. At first the department was small and up to 1906, no more than 27 students took courses in the department in the same year. Since 1906, however, the growth has been more rapid and this year 398 students took work in dairying.

The faculty of the department is composed of Professor Oscar Erf, head of the department, and three assistant professors, Omer C. Cunningham, William L. Clevenger and Robert B. Stoltz. In addition to this a field man, Ivan V. McKillip has charge of work in forming cow testing associations throughout the state.

The work of the department consists in teaching; research work, extension work, and testing for the advanced registry and cow testing associations. One semester's work is required of the four-year students in the College of Agriculture. In this course lectures are given on the secretion of milk, testing of milk and cream for butterfat, feeding and care of dairy cows in relation to the economical production of milk; and instruction in entering and testing cows for the advanced registry. In the lab-

oratory, the problems brought out in the lectures are put into practice.

For persons expecting to produce milk for the city trade, a course is given in city milk supply. This includes lectures and practical work on the handling and distribution of milk for the city trade, including milking and cooling, clarifying, pasteurizing, standardizing and bottling of milk and cream; testing of milk for butterfat and total solids; and methods of determining the bacterial count and leucocytes in milk in order to comply with the rules laid down by the various city ordinances. Courses in butter and cheese making are given for those persons wanting training to become managers in creameries.

Graduate work is offered along any line of dairying. This may be either economic dairying where the cost of producing dairy products is determined; investigational and research work in feeding and breeding dairy cows, in relation to milk production, the study of milk in its various phases, buttermaking, cheesemaking, ice cream making and milk condensing; or seminar work on assigned readings in experiment station and other dairy literature.

The course in dairying for the winter course students is divided into two parts. The first part pertains to farm dairying and advanced registry work and is given to meet the demands for those who wish to receive training in the formation of a dairy herd, the care, feeding and breeding of the herd, the production and the preparation of cows for the advanced registry. The second part is devoted to dairy manufacturing and has been established to meet the demand for a practical course of train-

ing in marketing of milk and its products and the manufacture of butter, cheese and ice cream. This course is intended for those persons who are unable to avail themselves of the advantages of the longer courses given in this department and is given at a time when the buttermakers, cheese makers, ice cream makers and milk men can best leave their work.

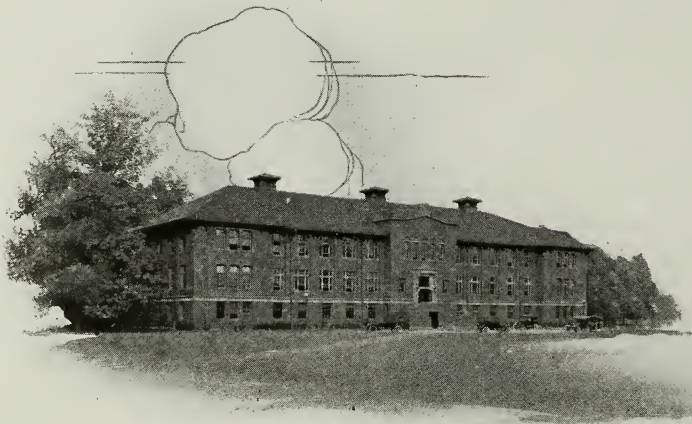
There are 79 supervisors of official tests of cows for the advanced registry and register of merit, in the field at the present time. Ninety-seven men have cows on yearly test and an average of 53 have short time tests made each month. There are nearly 1,000 cows on yearly test at the present time. Approximately \$15,500 has been spent by the owners for this work the past year.

There are in operation in the state at the present time twenty cow testing associations, in which 6,000 cows are being tested. The organization of bull associations, which is comparatively new work, is now being taken up with success.

The future plan of the department is to develop the work in the field in organizing of cow testing associations and bull associations. On account of the limited amount of room and the small amount of equipment, it is impossible to develop the instructional side of the work to any great extent.

Through the efforts of the department a number of inspection associations have been started. By these, the farmers regulate their own sanitary conditions and assist the cities in the work of inspection. Twelve associations of owners of pure bred dairy cows have been organized and are working in cooperation with the department.

Plans are being laid for the development of the creamery butter industry, with the idea of developing better production, improved shipping facilities and better sanitary conditions. By proper instruction and the enforcement of proper sanitary conditions, the development of the Swiss cheese industry has been assisted.



ACTIVITIES OF THE ANIMAL HUSBANDRY DEPARTMENT

PROF. CHARLES S. PLUMB

THE animal husbandry department has had the most successful year during its existence. This is especially due to two facts, the present instructional force, and improved teaching facilities, notably the live-stock equipment.

The faculty during 1915-1916, has consisted of two professors, three as-

The courses of study during the current year have gone through no changes. There are 19 courses offered at present, and 9 short or three-year courses. Next year the freshman class will not take animal husbandry work, but beginning with the following year, the sophomores will take the work the freshmen have heretofore had. The



University Library which contains one of the most complete sets of Herd books in the United States

sistant professors, one instructor, one assistant, and two extension workers, and a superintendent of live stock, ten in all. There was also a special instructor for the winter course work, and several graduates and seniors have assisted in laboratory work. About 900 students have been enrolled in the various classes each semester, including the short winter course.

junior and senior classes will have considerable opportunity to specialize in the work of this department. In fact one may take a group of studies in which animal husbandry is the major subject.

Graduate work will receive more attention in the future, and two members of the faculty will look after the graduate instruction. There will be

some experimental work conducted, both by members of the faculty and graduate students. Work of this character has been in progress during the present year.

The equipment of the department has steadily grown in amount and usefulness. We have never had so large a number of high class animals, and those now used in the class room are distinctly superior to those of a few years ago. We have about 25 horses of all ages, 90 head of cattle, about equally divided between beef and dairy breeds, 125 sheep and lambs, and about 120 pigs of all ages. We expect to make a fairly good show of some of these animals at the next International Livestock Exposition.

The Saddle and Sirloin Club is do-

ing valuable work in promoting an interest in live stock matters, both on and off the campus. The annual horse show managed by the club, has become an important show fixture in Columbus. The occasional addresses before the club, the social gatherings, and trips to stock farms and shows, have done much to inspire the lovers of live stock in the student body. The judging contests at the International have not been held now for two years, but will no doubt be held the coming December. Ohio State, it is believed, will make a creditable record. Whether we shall participate in the student's contest at the National Dairy Show at Springfield, Mass., remains to be seen. Men are now busy at work with this in view.



Saddle and Sirloin Club

Top Row: Santee, Guiler, Hammond, L. M. Evans, Phillips, Gault, Carr, Huber, Montgomery, Rule. Second Row: Elliot, Swanger, Marshall, Jobe, Zuercher, Richardson, Hook, Christen, McComb. Bottom Row: Baker, Whonsetler, Guard, George, Hunnicutt, Markey, Wiesenberger, Bolender, D. P. Evans, Davies, Feller.



OF
OHIO STATE UNIVERSITY.

A MEDIUM FOR EXCHANGE OF IDEAS BETWEEN COLLEGE AND FARM

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R. J. KINKEL, '16, Art Editor.

E. T. DAVIES, '16, Business Manager.
H. W. ZUERCHER, '16, Assistant Business Manager.

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COLUMBUS, OHIO, JUNE, 1916

EDITORIAL

With this issue The Agricultural Student completes its twenty-second volume. The work of the publication during the past year has been based on student interest as much as possible and with the hope that the publication could serve the student and the College of Agriculture efficiently. The pages of The Student have always been open to public service in any phase which would be of benefit to its readers.

The work of The Student has advanced during the past year in several ways. Several of the staff members have taken courses in journalism and associated with the problems that the farm paper editor has to deal with. In addition several members have extended their activities by writing for

farm publications with good success.

The Student has been active in promoting the work of the Association of Agricultural College Magazines which will aid in the financial success of agricultural college papers through the co-operation of all members. Such an organization will soon lift the amateurishness out of college journalism and place the publications where they will be recognized to a greater extent.

Next year's staff will be led by Ralph S. Christen, editor, and Harold G. Olin, business manager. Both have been connected with the publication closely during the past year and have identified themselves with its purpose and make-up. They deserve the cooperation and support of all in extending The Student into broader and larger phases.

One of the pressing problems of agriculture today is that regarding rural credits. After much investigation during the last few years there is no answer yet

THE RURAL PROBLEM.

in sight that can be admitted will help solve the problem. At the present time it is believed that when the farmer is educated, persuaded or forced to cooperate, his troubles will be solved. Much can be said for and against cooperation and the effect it will have on the future agriculture.

It is said that the American farmer is essentially individualistic and concrete. He can see a gate when he cannot see a fence, but if given a definite path to follow through cooperation, he could no doubt follow it with success.

A clear road ahead for the farmer is needed. No other industry is so badly handicapped as is agriculture, the basic and vital one of the country. The facilities for financing the farmer who is essentially a manufacturer are of the poorest. The cotton, and the woolen mills turn out their samples of spring goods in the fall, their fall goods in the spring, sell up their goods products for the season and turn over their orders to a banker as two name paper and receive the money at 5 per cent to run their mills and turn out the finished products. If the basis of all business is credit as it is, then farming in the sense of the word is no business.

The farmer cannot show samples nor take accepted orders for his wheat, his corn nor his milk to the bank and discount them as cash. He has no credit except the hard terms set down by the bankers. To put the farmer on a credit basis similar to those now in use by many of the commercial businesses is the aim of many earnest men today. Many of the men working along these

lines have had much to do with the making of the other American industries stable by putting them on a credit basis. By putting the industry of farming on a business basis this movement will go far in solving the rural problem.

—o—

In certain sections of the country a tendency is noted for farmers to form

COMMUNITY COOPERATION

associations to facilitate their work in breeding of live-stock and for promoting the general welfare of the community at large.

In Wisconsin we find the cooperation of the farmers of the county in forming the breed associations; in northwestern Missouri a county church forms the nucleus of an association devoted to the breeding of Shorthorn cattle, and the cow testing association is another form of cooperation found in Ohio and Michigan and other dairy sections.

The outcome of these undertakings can hardly be anything but successful. By working together these breeders will be in a position to better advertise their surplus breeding stock and better enabled to attract buyers because of the larger numbers of livestock they will have to select from. Their working together for the improvement of the breed will result in the production of animals of greater uniformity and quality, characteristics that attract buyers. The members of these associations will also be brought into a closer relationship of friendliness and goodwill that will mean much to the community at large. All lines of farming will be consequently benefitted.

Community cooperation of this kind is to be encouraged. Farmers working together with a definite purpose in view will accomplish much more than when each individual plugs away by himself.

Through cooperation farming can be made more profitable and farm life more enjoyable.

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When the graduating exercises of 1916 are over it is estimated that not more than 8,000 **AGRICULTURAL** men and women in **EDUCATION** the United States will have been graduated from institutions which have prepared students for a life in agriculture. Of these it is probable that not more than 5,000 will be engaged in work directly connected with the advancement of agriculture.

However small this may see, it marks the climax in the development of agricultural education. Ten years ago the world laughed at the idea of teaching farming at a college. Such inferior systems as were in use were viewed with scorn and contempt. The idea was not received cordially in the larger universities and the student of agriculture was often dubbed "aggie", "shorthorn" or "sodbuster"; he was always laughed at, usually ignored, and never tolerated.

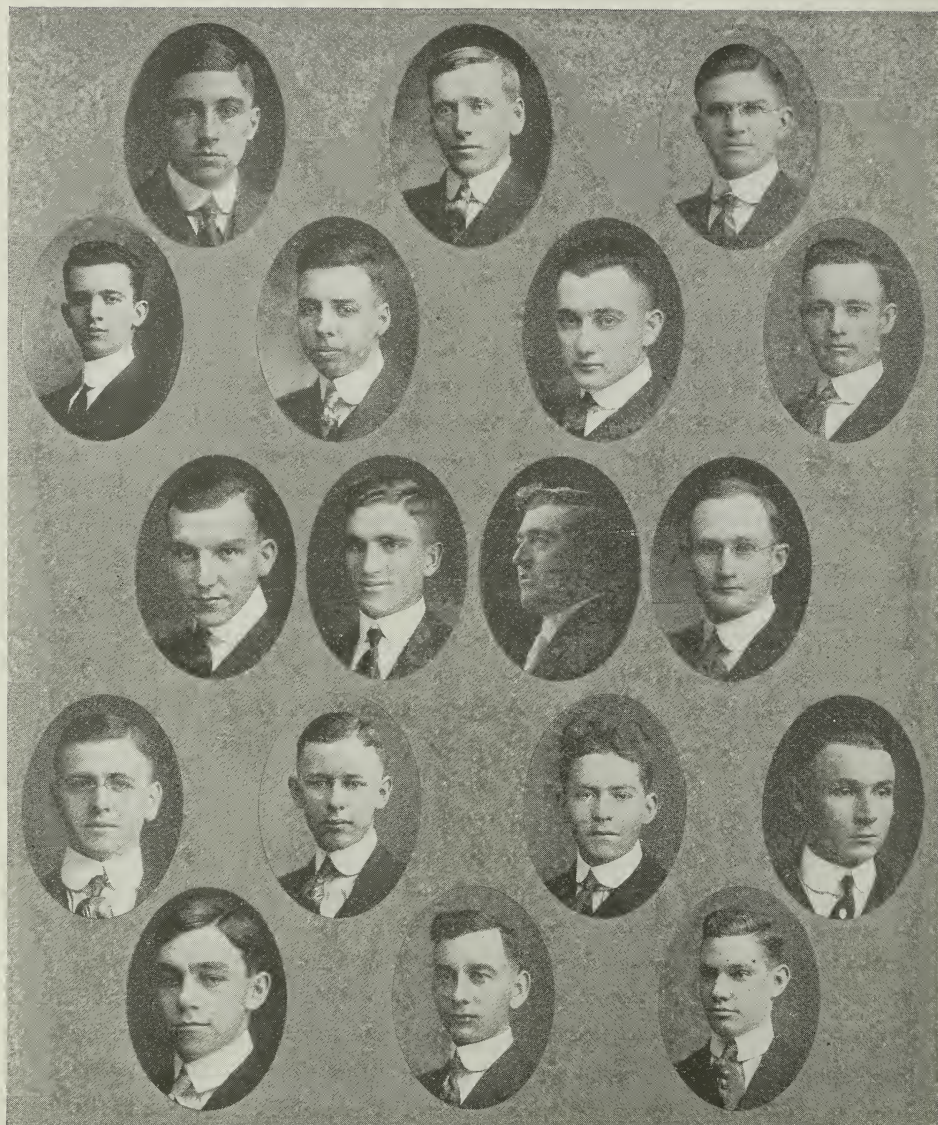
The growth of agricultural colleges has been steady until the past year, when the enrollment in some of the larger colleges fell off as much as 30 per cent. Ohio State, however, experienced no loss. The reason for the loss

is explained by educators as a reverse against the popularity of the courses by the city young men, who find that an agricultural education is not a short cut to quick fortune. On the other hand, the percentage of country boys and girls entering the farm college is constantly increasing, thus indicating the idea of agricultural education being closely based upon farm experience.

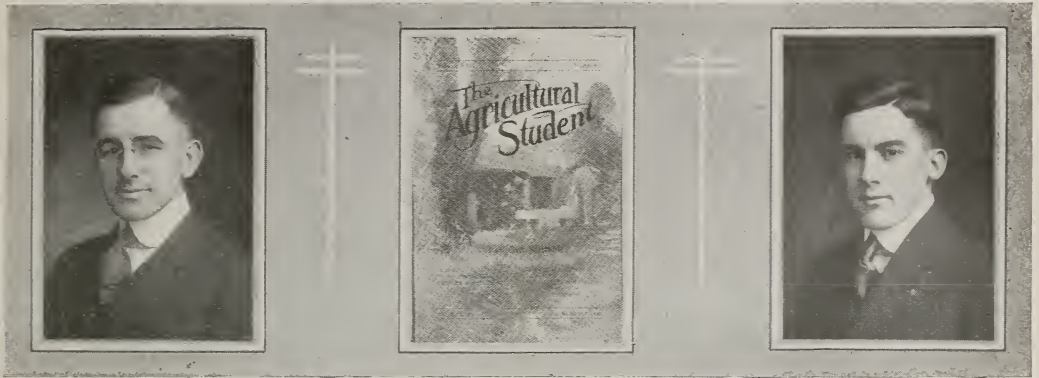
Agricultural education is open to criticism, the most thoughtful acknowledge freely, and yet through its inherent value it has been accepted by the majority of all classes as good. Merchant and manufacturer have come to realize that their interest is identical with that of the farmer. City and country alike are enthused over rural vocations, and there are relatively few youngsters who do not get a dose of agriculture somewhere in their educational curriculum.

The farmer of tomorrow will be as much in advance of the present-day agriculturist as the reaper and binder are over the sickle. He will be a professional worker equipped by training and education—to judge for himself instead of accepting the dogmatic statements of others. The rebuffs that agricultural education is meeting will be the stepping stones to a higher and more enlightened future.





Top Row. Christen, Zuercher, Elliot. Second Row: Conklin, Lewis, Markey, D. P. Evans. Third Row: Kinkel, Guard, Fife, Krause. Fourth Row: Leimbach, Jobe, Zimmerman, F. C. Evans. Bottom Row: Olin, Lutz, Oakley.



CLARENCE M. BAKER
Editor

EVAN T. DAVIES
Business Manager

HISTORICAL FEATURES OF THE AGRICULTURAL STUDENT

CLARENCE M. BAKER

SEPTEMBER 1, 1894, gave birth to *The Agricultural Student*, the first agricultural college publication ever published in the United States. At that time the enrollment in the College of Agriculture was less than 100 and practically all the agricultural equipment was housed in the basement of the University Hall and the old English building which was burned during February, 1914. The land between West Eleventh Avenue and the University oval was then known as the cow pasture. In fact all the campus save several acres around University Hall afforded grazing grounds for the University livestock. The athletic grounds then occupied a position near the corner of Tenth and Neil Avenues while the cane rushes were held in the cow pasture between the present location of Orton Hall and the Chemistry building. Such structures as Townshend Hall, the Horticultural and Forestry Building, the Botany and Zoology building and the Home-Economics building were not even dreams in the minds of the agricultural students.

At that early date the study of agriculture held little interest among peo-

from an educational standpoint. Although the School of Agriculture was an adjunct to the University, its students were regarded as having no common bonds of fellowship with those of the other departments. The "ag" was held apart from those of other courses of study—a victim of unfortunate circumstances. He was stamped an "ag" and neither vice nor virtue could make him different in the minds of other students.

However, in the spring of 1894 Charles W. Burkett, a junior agricultural student, was elected as one of The Lantern editors by the Horton Literary Society. The election was warm: many ballots were prepared but Burkett won and the first agricultural student had a place on The Lantern staff.

Coincident with the development of the College of Agriculture at this early date was the establishment of the Agricultural Students' Union, an organization which promotes cooperative experiments in different sections of the state through the influence of the agricultural students in the University. Naturally such an association wanted an official organ to publish their re-

ports and the name of The Agricultural Student suggested itself. The Union grew from the start and is now exemplified in the work of the Agricultural College Extension Service of the University and several divisions of the Ohio Agricultural Experiment Station at Wooster.

When Burkett, who had been the instigator of the publication of The Agricultural Students' Union, broached the subject of publishing an agricultural college periodical the idea met with laughter; almost ridicule. Only one member of the faculty expressed any faith in the venture. Dean Hunt of the College did say go ahead but a few days later there arrived the following typewritten statement which by necessity ran for many years at the head of the editorial columns: "While this paper is published with the approval and the consent of the President of the University and the officers of the School of Agriculture, the editors are alone responsible for the statements in all unsigned articles."

Nothing daunted the efforts of the amateurs behind the rudimentary student paper. In due time the first edition of 5,000 was run off the press. An editorial in The Lantern at that time ran as follows: "The success of the venture remains to be seen but we prophesy a long and successful career for our contemporary and wish it many returns for its birthday." A statement in the first issue of the magazine touched the surface; its object being "to bring the University and especially the School of Agriculture into more friendly relations with the people, particularly the farmers of the state."

F. P. Stump, '92, then in charge of the University farm became interested in the paper and offered his support. He had business connections and ac-

quaintances in the city and it was through his persuasive powers that business men were coaxed into advertising the first year. In fact, had it not been for the success of Mr. Stump in soliciting advertising, the primitive paper would have become bankrupt in its infancy.

Since 1907 The Agricultural Student has been under the complete control of the students in the College through the membership of two societies. Previous to that time the editors and business managers were elected by the Agricultural Society but the magazine was controlled and its policies shaped by members of the faculty. In March, 1916, at the disbandment of The Agricultural Society, the matter of future elections was given to Townshend Literary Society.

The growth of the publication has been steady, from a 12-page publication to a magazine more than six times that size. The elections have occasioned no little rivalry. On one occasion the meeting of the society lasted until 1:30 a. m. Even the president of the society was afterwards called before the authorities of the University to explain why a desk had been battered by the jawbone of a horse which had been hastily secured from some veterinary professors' supplies and used as a gavel.

In the fall of 1915, The Agricultural Student, with seven other agricultural college magazines which have followed the Ohio State publication closely in purpose and makeup, formed the Association of Agricultural College Magazines. The circulation of all the magazines is pooled thus offering to advertisers a national body of 15,000 farmers, livestock growers, students and commercial readers. The organization has its own business, advertising and

soliciting agents in New York and Chicago, besides a students business manager in each of the cities in which the magazines are published. The list of magazines in the organizations are: The Agricultural Student, The Cornell Countryman, The Illinois Agriculturist, The Iowa Agriculturist, The Purdue Agriculturist, The Penn State Farmer, The Wisconsin Country Magazine and The College Farmer (Missouri).

As a result of the training which the publication has given its editors and business managers, eight of the sixteen who have been connected with The Student since its first appearance have gone into agricultural journalism

activities. The list includes: Charles W. Burkett, '95, editor of The American Agriculturist, New York City; John F. Cunningham, '97, '99, editor of The Ohio Farmer, Cleveland; Charles E. Snyder, '09, editor of The Farmers' Review, Chicago; Samuel R. Guard, '12, associate editor of The Breeder's Gazette, Chicago; Glen G. Hayes, '12, editor American Farming, Chicago; O. M. Kile, '13, managing editor eastern division, Soil Improvement Committee, Baltimore, Md.; J. W. Henceroth, '14, assistant agronomist, Soil Improvement Committee, western division, Chicago; L. L. Rummell, '15, editor of publications The Ohio Agricultural Experiment Station, Wooster.



Townshend Literary Society

Top Row: Smith, Hatten, Wills, Brady, Kirke. Second Row: Shong, Crim, Budd, Studebaker, Cooper, F. C. Evans, Montgomery, Miller. Third Row: Cross, Coe, McChesney, W. L. Hammond, Applegate, Duprey, Fife, Hunnicutt, Christen. Fourth Row: McComb, Snode, George, R. A. Hammond, Foster, Stear, Stutz, Phillips, Davies, D. P. Evans. Bottom Row: Dean, Krause, Schuer, Jones, Elliot, L. M. Evans, Fenn, Priest, Guiler, Hendrix, Bolender.



WHAT THE SENIORS WILL DO NEXT YEAR



Walter A. Alexander will manage a farm at McComb, Ohio.

Sherman L. Anderson will engage in dairy work.

William D. Axtell will be supervisor of a cow testing association in Trumbull County, Ohio.

Clarence J. Babcock will do investigation work in dairying.

Chester A. Baird will work with the U. S. Geological Survey in the eastern part of Ohio.

Clarence M. Baker will operate the home farm at Wooster, Ohio.

Robert R. Barker is a chemist in the soils department at the Ohio Agricultural Experiment Station at Wooster.

Floyd A. Bensinger will engage in commercial work.

Lott E. Bechtel is farming 250 acres near Pemberville, Ohio.

Elbert O. Bolender will farm at Felicity, Ohio.

Oliver L. Bracken will work for the H. J. Heinz Company at Pittsburgh.

Uri F. Bruning is farming 250 acres at Pemberville, Ohio.

Raymond M. Carr will operate the home farm at Bellefontaine, Ohio.

Charles A. Carran will work in the office of the auditor of Cuyahoga county at Cleveland this summer.

Carl T. Colt will be advance man for the Redpath Chautauqua this summer.

Clifford T. Conklin will be connected with the boys' and girls' club work in the extension department.

Carl F. Cranz will operate a dairy farm at Ira, Ohio. He expects to breed Holstein cattle.

Eldon F. Dailey will manage the home farm at Albany, Ohio.

Evan T. Davies will take up work in agricultural advertising.

Floyd D. Crim expects to enter the government service in agricultural work.

Floyd S. DeLashmutt will engage in dairy work.

Howard E. Devore will operate his home farm at Gilboa, Ohio.

Thomas O. Dickey will engage in the poultry business on his home farm.

Arthur T. Dachendach will farm at Bellefontaine, Ohio.

Clayton H. Elliot will engage in sheep farming at home near West Mansfield, Ohio.

David P. Evans will take up the commercial side of dairying.

Leon M. Evans will operate a livestock farm at Jackson, Ohio.

Ernest N. Fergus expects to enter the teaching profession with chemistry as his specialty.

William S. Ferguson will operate the home farm at Lexington, Ohio.

Verne H. Finsterwald will farm at Athens, Ohio.

Walter E. Foster will engage in farming at Thornville, Ohio.

Raymond C. Gauch will be a representative for the Equitable Life Insurance Company of Iowa.

John B. Gault will operate a farm at Milford Center, Ohio.

Russell L. George will manage a farm at Okeana, Ohio.

John S. Gibbs will farm near Cleveland, Ohio.

Lewis L. Guard will engage in farming at Elizabethtown, Ohio.

George G. Guiler will farm at his home near Whigville, Ohio.

Horace K. Havlicek will be in summer school at Ohio State University this summer. He will take work for a degree in education next year.

Robert A. Hammond will take up livestock farming at St. Clairsville, Ohio.

Bert S. Harrod will manage the home farm at Harrod, Ohio.

John E. Hendrix will enter the teaching profession.

Donald D. Hughes will do farm survey work for the extension department.

George R. Holmes will farm near Wauseon, Ohio.

Rossford Jones will farm at Radnor, Ohio.

Philip J. Kimball will go into the banking business at Mechanicsburg, Ohio.

Roy C. King expects to teach agronomy.

Charles Kirkwood will operate a farm at Shiloh, Ohio.

Merle S. Klineck who finished his work the first semester is farming near Hebron, Ohio.

Edwin H. Krause will take up dairy work.

Harold M. Lathrop will manage a dairy farm at Wellington, Ohio.

William E. Laughlin will farm at Lore City, Ohio.

Henry A. Lehman will engage in dairy work.

Henry L. Leimbach will operate the home farm at Vermillion, Ohio.

Harry A. Levine will take up dairy work.

Olin R. McMillin will farm at Marengo, Ohio.

Joseph B. Markey will teach animal husbandry.

Frances L. Morison will operate a farm at Kenton, Ohio.

Harry W. Palmer will enter the teaching profession.

Roy Priest will engage in farming at his home at Newark, Ohio.

Henry W. Schuer has a scholarship in field crops at Ohio State University. He will return to take his Master's degree.

Carl M. Senn will be assistant instructor in wood working at the Ohio State University.

Stanley W. Schwarztrauber will attend school this summer at Ohio State University.

Herman Simon will work for the H. Simon Iron and Steel Company at Cleveland.

George L. Schuster will be assistant in farm crops at the Ohio State University.

Benjamin S. Snode will be a herdsman at the Ohio State University.

Wyndham E. Sparling will manage a farm at Andover, Ohio.

Rolin E. Steen will follow general farming at his home near Sandusky, Ohio.

Glen Swanger will be an assistant in the department of animal husbandry at the Ohio Agricultural Experiment Station at Wooster.

Frank R. Thompson will manage a farm at Lewisburg, Ohio.

Clyde F. Tom will take graduate work at the Ohio State University.

Leland E. Thornberry will be in the department of animal husbandry at the Ohio Agricultural Experiment Station at Wooster.

Albert R. Tuttle will operate a general farm near Springfield, Ohio.

Jay M. Whitney will take up work in some line of agricultural engineering.

Jesse E. Whonsetler will farm at Creston, Ohio.

Arthur C. Wiesenberger will go to the University of Maine where he will specialize in poultry.

Harrison W. Zuercher will enter commercial agricultural lines.

Horticulture.

Herbert C. Albing will take up work in landscape architecture at Philadelphia, Pa.

Edward C. Clayton will engage in commercial orcharding on his brother's farm at Oakland City, Ind.

Frank Copper will manage an orchard at Delaware, Ohio.

Frank B. Cross expects to enter the teaching profession.

Dallas D. Dupre will work for the Indianola Greenhouse Company at Columbus.

Joel L. Foote will take up truck farming on a farm near Cleveland.

John D. Forsythe will go into commercial orchard work.

Christian R. Gaiser will manage his brother's fruit farm near Cleveland.

Norwood W. Glines will operate an orchard and farm near Marietta, Ohio.

Joseph J. Hejna will work for A. D. Taylor, non-resident professor of horticulture, as a landscape architect and will be located at Cleveland.

Roeder J. Kinkel will take up work in landscape architecture at Rochester, N. Y.

Albert C. Kette will operate a large peach orchard in Georgia.

Elmer P. Knoll expects to teach agriculture and coach high school athletics.

Stanley W. Leonard will work for A. D. Taylor, non-resident professor of horticulture, as a landscape architect and will be located at Cleveland.

Donnell D. Leyda will engage in orchard work near Pattersonville, Ohio.

Paul H. McClure will teach high school agriculture and coach athletics.

Willard H. Mosier will be instructor in horticulture at Ohio State University.

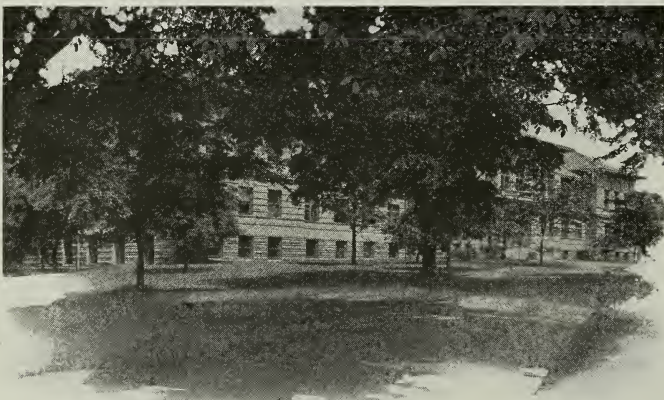
Merritt C. Nauts expects to go into greenhouse work near Toledo.

Harold C. Peebles has a scholarship in bacteriology at the Ohio State University.

Harold R. Penton will be an assistant in vegetable gardening in the department of horticulture at Ohio State University.

Clarence M. Sallee will work for the Crutchfield and Woolfolk wholesale Produce Company at Pittsburgh, Pa.

Harold Schuh will go into the real estate business at Dayton.



JUNE NEWS NOTES

CORRESPONDENCE COURSE.

The agricultural correspondence course which was given for the first time this year under the direction of the extension department of the University, and is one of only three similar courses offered by universities in the country, has been a success and will be continued next year on an enlarged plan.

The extension department started out last fall by offering courses in nine different subjects consisting of from four to thirteen lessons, depending on the subject. These lessons were mailed one at a time and the second lesson was not sent out until the answers for the first lesson were received. These answers were graded and sent back. By this plan there is always an assurance that the lessons were being studied.

The demand for lessons this year has greatly exceeded the supply. Requests numbering 6348 were received and only 4644 could be accommodated. With the present plans accommodations for all will be made next year.

“Agricultural Entomology” is the subject of a new book by Prof. Herbert Osborn of the department of zoology. Lea and Febinger of Philadelphia are the publishers. Many of the figures in the book are from drawings or photographs made by the author or his students. There is also an extended glossary of technical terms in the book.

UNIVERSITY GRANGE.

The University Grange, which is the largest grange in the world and has broken all records for initiation, held its last meeting of the school year on May 24. Louis J. Taber, master of the

state grange, addressed the meeting. Following the initiation of 39 members into the fourth degree refreshments were served by the home-economics students.

Since January 1, 319 have been taken into the University Grange, making it the largest of all subordinate organizations ever placed upon the national roster. The local organization also holds the record of initiating the largest class at one time in grange history, the number being 283. This was done in March. This record also places Ohio at the head of all states in grange extension and high record classes. The next meeting will be held on September 27.

INSPECTS COLLEGE.

“The agricultural work being done by Ohio State’s College of Agriculture is far in advance of that being done by like institutions,” said Hon. James Wilson, former secretary of agriculture, who recently visited the campus to investigate the work being done by the College of Agriculture. “The instructional force in agriculture is one of the ablest and best that I have met in the course of my investigations.”

Mr. Wilson was strong in praise of President Thompson and Dean Alfred Vivian, both of whom he referred to as being great assets to Ohio State. He considers Ohio State the leader among colleges in agricultural extension work and was much pleased with the co-operative scheme that exists between Ohio State and other colleges.

The National Agricultural Society has engaged Mr. Wilson to visit the principal agricultural colleges of the United States to study what work is being done by them. This society was

organized by James J. Hill, Western railroad magnate, and others, believing that agriculture as a basic industry has not been given the attention it deserves. It is endeavoring to devise some means to develop agricultural work in colleges and other educational institutions.

Thirteen students in the department of animal husbandry under Prof. Schuyler M. Salisbury, made a trip through northeastern Ohio on May 18, 19 and 20. Cattle were inspected and judged in the herds at the Anna Deane Farm at Barberton; Old Orchard Farm at Mentor; Cherry Farm, Mentor; Sherwin's Ayrshire Farm, and May and Otis Milking Shorthorn Farm at Willoughby; Hull Bros.' Farm, Perry; Fairview Farm, Geneva; Maplecrest Farm, East Claridon; Meadowholm Farm, Chesterland, and E. H. Baker, Gates Mills. The students making the trip are members of the class in dairy cattle judging. From this class will be picked a team of three to represent the Ohio State University at the National Dairy Show judging contest, which will be held at Springfield, Mass., October 12 to 21.

EXTENSION WORK

There are eight lines of work which are given attention through the extension department specialists and county agents. They are farm bureau work, boys' and girls' club work, publications, farmers' institutes and extension schools, farm management demonstrators, cow testing associations, special demonstrations in planning home grounds and agricultural engineering, and home-economics.

Spraying and pruning demonstrations with the home planning and agricultural engineering activities have

constituted the bulk of the work accomplished during the spring months the total number of communities visited being 175. Oat smut meetings were scheduled at the rate of one every hour during a week's campaign in Mahoning county with County Agent D. W. Galehouse.

In the boys' and girls' club work, forty-three counties have signed contracts to conduct pig growing, poultry raising, dairy cow records, home making and live stock judging activities. A number of specialists have spent several days in each of the counties organizing the work with the public school authorities.

In the agricultural engineering work Virgil L. Overholt has designed and installed 11 concrete septic and water tanks, 15 farm water supply systems, and designed more than 50 farm barns. In addition numerous drainage systems covering from 10 to 1100 acres, have been laid out for farmers over the state. Plans for self-feeders, hay racks, garages, and other farm commodities have been sent to 1500 farm homes. The planning of farm houses, dairy barns and outbuildings has been done largely at the central office.

Through the farmers' institutes 450,000 people have been given practical instruction in agriculture. It is estimated that the total number of Ohio people through all means including demonstrations, extension schools, club work will reach 600,000 this year.

Farm demonstrations have been conducted in eight counties and plans are being made to extend this form of extension service rapidly during the coming year. The work is done mainly in cooperation with county agents. Ohio now has thirteen county agents or farm bureau managers.



Commencement



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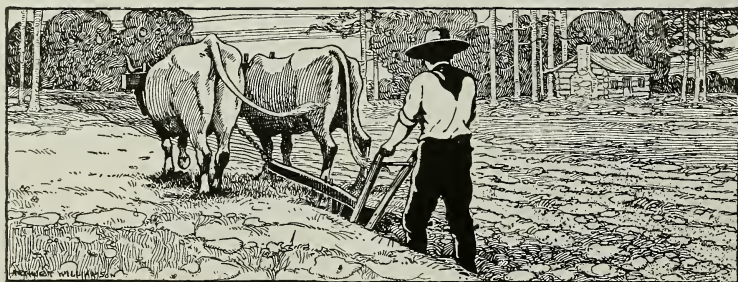
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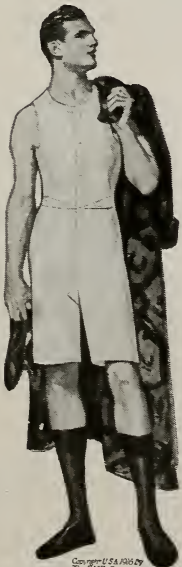
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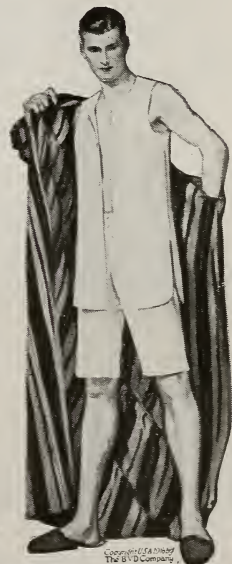
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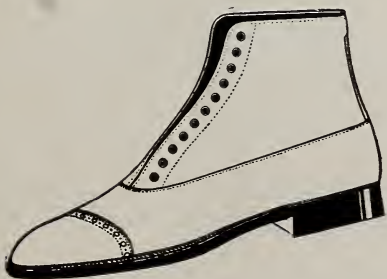
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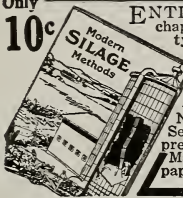
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The Ohio State University maintains a herd of swine, including Duroc - Jersey, Berkshire and Large Yorkshire breeds. We select and breed with special care. We sell no culls for breeders. We offer a limited number of selects during the year. For further information address

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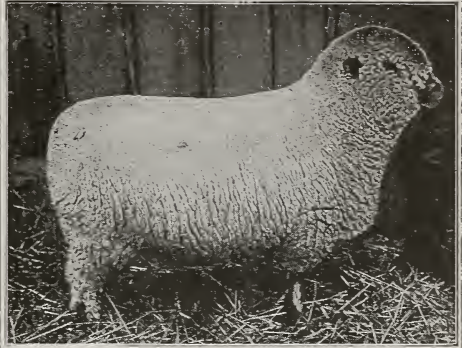
Dr. A. J. Koeble, Batavia, O., says: "Send another ton Corn Three D Grains. It is all you claim for it and gives more returns than twice the amount of Bran. We cut out bran and added this. Our 19 cows gained 10 gallons a day, and at less cost."

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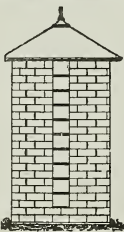
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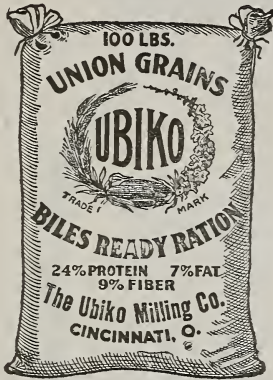
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UNION GRAINS is nothing but a scientific mixture of pure feeds. It has the **strength, bulk, variety** and **palatability** necessary to produce maximum milk flow and keep the cow healthy.

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These are the only light-weight farm engines. High speed and throttle governor, with perfect balance, give smooth, continuous flow of power and uniform speed instead of violent, irregular explosions and fast and slow speeds of old-style engines. This explains why Cushman engines are so light in weight, yet more steady-running and more durable than engines weighing four or five times as much.

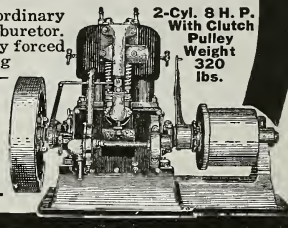
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Besides doing all regular jobs, Cushman Engines may be used for so many jobs heavy engines cannot do. 4-H. P. is original binder engine, also used on corn binders and potato diggers. 8 H. P. used on hay balers, corn pickers, etc. 15 H. P. weighs 780 lbs.; 20 H. P. only 1200 lbs., for heavy duty.

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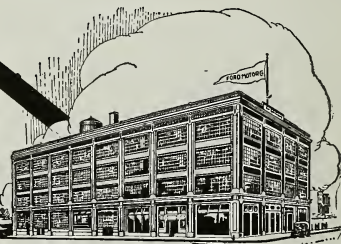
Cushman Engines are not cheap, but they are cheap in the long run.

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This great genius of the automobile industry builds for permanency. Ford buildings must be enduring, need few repairs, be fireproof. Natco Hollow Tile is specified. Settle your silo problem—buy a Natco. Be sure of perfect ensilage at all times. Do away with repairs and adjustments. Erect the worryless



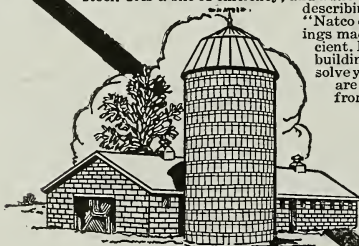
Ford Branch at Columbus, Ohio. Natco Hollow Tile was used in this building.

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"The Silo that Lasts for Generations"

Its hollow, vitrified, clay tile are impervious to air and moisture—they preserve the silage sweet and juicy. The dead air spaces in the wall resist frost—making it the silo for severe climates. The continuous, reinforcing bands laid in the mortar hold it in a grip of steel. It is a silo of efficiency, and a silo you'll be proud of. Send for our silo catalog describing it fully. Also get our splendid new book,

"Natco on the Farm," describing other farm buildings made of Natco Hollow Tile and just as efficient. Both books free. We have many farm building plans to submit, and will help you solve your building problems free. What are you going to build? Let's hear from you. Write today.



A Natco Silo and a Natco Barn mean Permanency and Prosperity.

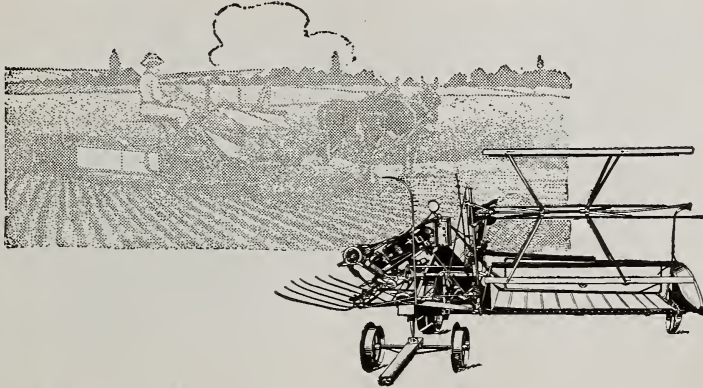
National Fire Proofing Company

1132 Fulton Building
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Natco Silo Wall. Notice steel reinforcing bars laid in the channels.

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KNOWING the conditions in your harvest fields as well as you do, it will be an easy matter for you to pick out the right grain binder for your work. Note the details of construction—How is the main frame built? Is the main wheel large enough and wide enough to give plenty of traction? Is there a simple means provided for quickly and easily taking the strain off the canvas at night, or when the binder is out of use? Are ball and roller bearings provided to lighten the draft? Will the elevator take care of both light and heavy stands of grain? Is the knotter simple and sure in action? These are the things that count.

In the IHC binders—**Champion, Deering, McCormick, Milwaukee, Osborne and Plano**—these things and all other details are taken care of. Own an IHC binder.

The same arguments hold good for the twine you use. Ask for and insist upon getting an IHC twine, made to work in the binder you buy, and sold at the lowest price consistent with IHC quality.

Your local dealer can furnish you with IHC binders, repairs and twine. See him or write to us for complete information.

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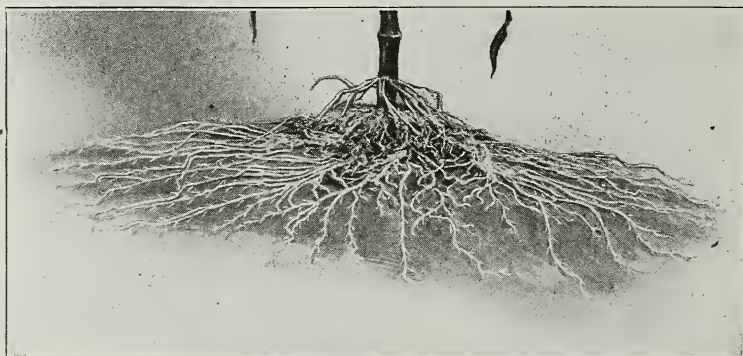
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Corn Roots As They Are— An Actual Photograph

The only one of its kind. Taken ten days after the last cultivation, showing the upper brace roots, lower brace roots and the long roots which feed and develop the stalk and ear growth.



CORN ROOTS PRODUCED BY TOWER CULTIVATION.

A steel plate was drawn four inches below the surface under a full grown, well developed stalk. The plant with several hundred pounds of dirt attached was then lifted out and immersed in water and the dirt slowly washed away from the roots, leaving them in the position they occupied in the ground. Only about sixty per cent. of the roots are shown, as it was necessary to cut down on one entire side of the stalk in order to get the steel plate under it.

The upper brace roots are the strongest and come last. They are for the purpose of supporting the stalk on the ear. The next lower are the brace roots, which support the plant while it is from two to four feet high. The lowest set are the roots which nourish the stalk and ear; they are all within four inches from the surface and are twenty inches and more in length.

Save the Roots---Increase the Yield

This photograph shows how to increase the yield, as Deep Shovel Cultivation cuts off the roots, shuts off the nourishment and stunts the plant.

Can you not see this plainly?

Surface cultivation kills the weeds, conserves the moisture, saves the roots, makes the corn ripen earlier and increases the yield per acre.

You are assured of clean, productive fields every time if you use the TOWER SYSTEM OF SURFACE CULTIVATION.

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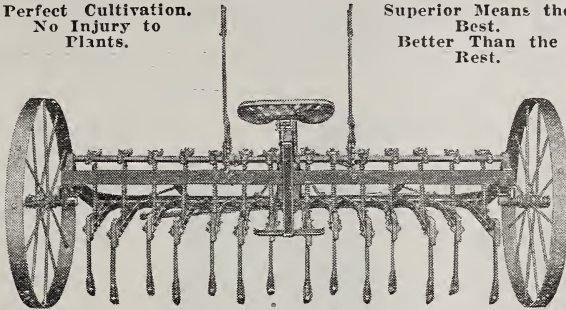
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"The Name Tells the Story"

SUPERIOR ALFALFA CULTIVATOR

Perfect Cultivation.
No Injury to
Plants.

Superior Means the
Best.
Better Than the
Rest.



Especially designed for the proper cultivation of Alfalfa, but is also an excellent implement for preparing any seed bed.

Operator sits well behind the work and can see what is being done. Levers within easy reach. More or less pressure can be instantly applied to suit ground conditions. Also, should Cultivator "load up" with trash or the hay left from cutting, operator can immediately free the machine.

Th important things in cultivating Alfalfa are: Thorough cultivation of the soil, without injury to crowns and roots, and the eradication of weeds.

The Superior is so constructed that the teeth move from side to side and work around the roots and crowns.

When you injure an Alfalfa root or crown, decay sets in, the plant becomes sickly and finally dies.

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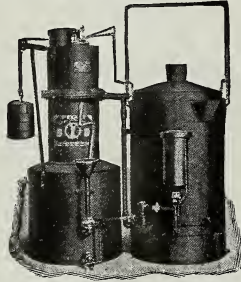
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SUPPLY A CITY CONVENIENCE TO COUNTRY HOMES

A simple, automatic gas machine, producing the most beautiful light in the world. Cheaper than kerosene. Installed in cellar or outside the house.

**Absolutely Safe
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Handsome ornamental chandeliers.

Barns lighted by pull of a chain—no matches needed.

Clean and cheap for cooking.

**A Cool Kitchen
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Used today in more than 250,00 Country Homes. Pilot Lighting Plants installed complete, ready for use and guaranteed. Write for estimate.

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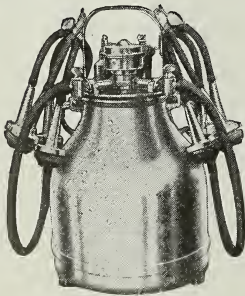
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With two B-L-K Milkers one man can milk 26 cows in an hour



Burrell (B-L-K) Milkers

They are easy to handle and great money savers. Dust and dirt cannot get into the machines at milking time and they are easily kept clean and sterile.

If you are interested in high grade milk and a method of reducing your milking cost, write today for our

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Manufacturers also of "Simplex" Cream Separator and other "Simplex" specialties—"The Best in the World."

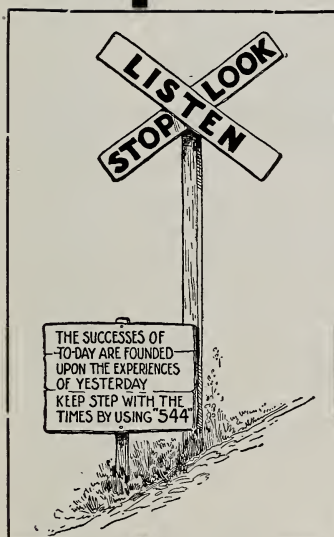
USE



FOR

The Treatment and Prevention of Hog Cholera

READ THE FOLLOWING UNSOLICITED LETTER—IT TELLS
THE WHOLE STORY



Seaford, Delaware, Jan. 19, 1916.

The Thiele Laboratories Co., Columbus, Ohio.

Gentlemen:—It has been the writer's intention for some time to write you, giving you a full report on the wonderful success we have had in using your "544" for the prevention, treatment, and let us make here the strong statement, proven by facts, cure of hog cholera.

As you are aware from our previous correspondence, we are among the largest swine breeders in the East. Four years ago we inoculated hog cholera into our herd by using a non-potent serum. Up to that time we had a perfectly clean plant, but were surrounded by cholera. During that year we lost one hundred and sixty-four, including boars, sows, shoats and little pigs. This called for quick action; something had to be done or go out of the business.

We then took up the double or serum-virus treatment. Our first treatment, or rather inoculation, proving about 75 per cent immunized hogs. We continued with this treatment till we began using your "544." Later results with this simultaneous treatment had proved about 75 per cent to the bad. Hogs treated died of cholera.

This year, with cholera all around us and hogs dying in hundreds, we had but fourteen cases. These were all pigs from four weeks to three months old, and we lost but four. We attribute both the fewness of cases and the recovery of ten sick to "544."

We note in your advertisements that you say "544" will cure hog cholera if taken in time, with proper treatment. This we think we can surely confirm, and gladly do so, from the above experience.

We herewith enclose you check to cover statement rendered, also thirty (30) dollars in addition, for which please send us at once six more bottles of "544." We wish to add that on receipt of this we will at once inoculate two hundred little pigs, ranging from three to eight weeks old. We also have fifteen more sows that will farrow within the next two months.

Awaiting your early reply, we beg to remain,

Very truly yours,

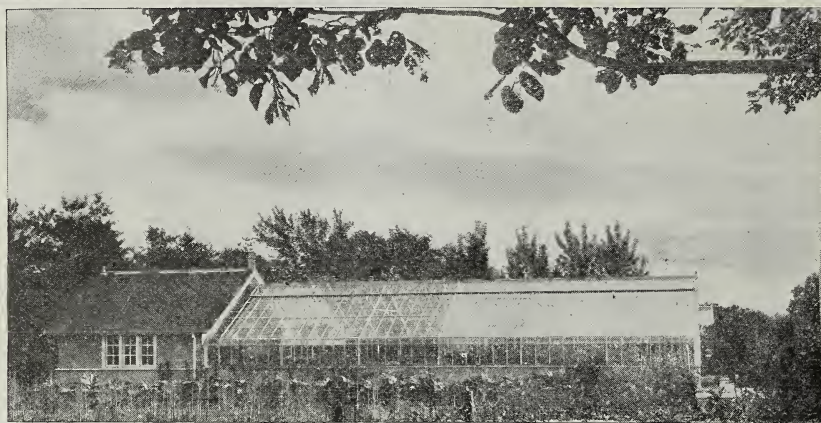
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J. J. ROSS & SON.

If interested or further information is desired,
write for Free Booklet to

The Thiele Laboratories Co.

HARTMAN BLDG., COLUMBUS, OHIO



Fits and Misfits in Greenhouses

OFFHAND, there are at least four major requirements that positively must be met to satisfy your idea of the greenhouse you want.

FIRST: It must be so designed that it will grow the flowers, vegetables, or fruits you want, so as to give the best results for the labor and coal expended.

SECOND: It must be so constructed that it will be free from those exasperating, recurrent, repair expenditures incident to many of the greenhouses you have heard of or know about.

THIRD: It must fit attractively on your grounds. Not just a greenhouse, but a

greenhouse designed for your particular location.

FOURTH: The price must be reasonable.

If we are right in assuming that these are your requirements, then we should like to take up with you the question of designing and building a greenhouse for you.

We may be able to do it entirely to your satisfaction by writing. But with our many offices in various parts of the country it makes it possible for our representatives to quickly keep appointments at a time and place to suit your convenience.

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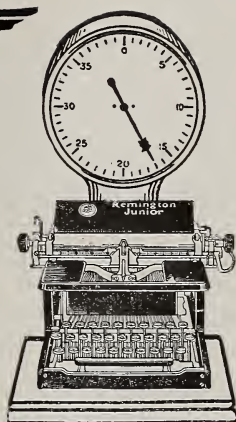
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